1   1.   A method of preparing an image for downloading over a link comprising:

2   receiving a user selection for an image to prepare;

3   retrieving current user settings reflective of desired settings for compressing the image;

4   and

5   automatically presenting a plurality of variations of the image to the user where each

6   variation is derived using compression settings that are scaled from the current user settings.

1   2.   The method of claim 1, further including estimating an amount of time required to

2   download a given variation to the user where the estimated time is calculated from an assumed

3   transmission rate of the link.

1   3.   The method of claim 1, further including determining a file format for the image and

2   using the current user settings designated for the file format in presenting a representation of the

3   image.

1   4.   The method of claim 3, wherein the step of determining a file format determines an

2   optimum file format for the image based on a predominant nature of the image data.

1   5.   The method of claim 4, wherein the step of determining an optimum file format for the

2   image includes determining a predominant form for objects in the image and the step of

3   automatically presenting includes scaling compression settings from the current user settings

4   where the particular settings that are scaled depend on the predominant form of the image.

1   6.   The method of claim 5, wherein the predominant form is selected from the group of

2   photographic and line art.

1   7.   The method of claim 6 further comprising determining if the predominant form is

2   photographic and if so, setting the optimum file format to a JPEG/JFIF format.

8. The method of claim 6 further comprising determining if the predominant form is line-art and if so, setting the optimum file format to a GIF format.

1 9. The method of claim 4, wherein the step of determining an optimum format includes:
2 calculating an amount of noise in the image;
3 setting the optimum file format to a JFIF format if the amount of noise is above a
4 predefined threshold, and otherwise setting the optimum file format to a GIF format.

1 10. The method of claim 9, wherein the step of calculating an amount of noise includes:
2 for each pixel in the image,
3 comparing a relative color change between the pixel and one or more adjacent
4 pixels to derive relative color change data;
5 determining an overall color change for the image using the relative color change
6 data for each pixel; and
7 comparing the overall color change to the threshold value.

1 11. The method of claim 10, wherein the step of comparing the relative color change includes
2 deriving a first set of color change data for a pixel by comparing the color of the pixel with a
3 pixel immediately next in raster order.

1 12. The method of claim 11, wherein the step of comparing the relative color change includes
2 deriving a second set of color change data for the pixel by comparing the color of the pixel with
3 a pixel at a same location in a next scanline of pixels for the image.

1 13. The method of claim 12, wherein the step of determining an overall color change
2 includes for each color change data set, summing all the color change data and averaging over
3 the image.

1 14. The method of claim 9, wherein the step of determining an overall color change includes
2 summing all the color change data for the image and averaging over the image.

16

15. The method of claim 9, wherein the step of comparing a relative color change determines an actual color difference irrespective of a perceptual color difference.

1 16. The method of claim 4, wherein the step of determining an optimum file format includes:

2 inspecting the image to determine if any pixel in the image is transparent; and

3 if so, setting the optimum file format to a GIF format.

1 17. The method of claim 4 wherein the step of determining an optimum file format includes:

2 inspecting the image to determine if the image includes more than one animation frame;

3 and

4 if so, setting the optimum file format to a GIF format.

18. The method of claim 1, wherein the step of automatically presenting includes receiving a user selection that defines a number of automatically derived variations that are to be presented to the user and automatically generating the number of variations selected.

19. The method of claim 18 further comprising adjusting the scaling of the current user settings for each variation depending on the number of automatic variations that are to be presented.

1 20. The method of claim 1 further comprising displaying the image at the current user

2 settings.

1 21. The method of claim 20 further comprising displaying the image at current user defined

2 compression settings along with three variations in a four-up orientation on an output display

3 device.

22. The method of claim 1, wherein a first variation is generated by scaling the current user settings and a second variation is derived by scaling the scaled user settings used in deriving the first variation.

17

1   23.   The method of claim 1 further comprising receiving user modifications to the current user

2   settings used to derive a variation and redisplaying the variation at a compression level using the

3   modified user settings.

24.   The method of claim 23, further including recalculating settings for each variation using

the modified user settings and redisplaying each variation at a compression level using modified

user settings.

1   25.   The method of claim 1, wherein each variation is a smaller and lower quality version of

2   the image when produced using the current user settings.

26.   The method of claim 1 where the estimated download time is presented along with each

variation of the image.

1   27.   A computer program for preparing an image for downloading over a link, the computer

2   program includes instructions for causing a computer to:

3   receive a user selection for an image to prepare;

4   retrieve current user settings reflective of desired settings for compressing the image; and

5   automatically present a plurality of variations of the image to the user where each

6   variation is derived using compression settings that are scaled from the current user settings.